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EXAMINER

TRAN, NHAN T

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 07/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

B

# Office Action Summary

Application No.

09/414,104

Applicant(s)

OKADA ET AL.

Examiner

Nhan T. Tran

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 October 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 4 recites the limitation "said predetermined period" in line 2 of claim 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "said predetermined period" in line 2 of claim 26. There is insufficient antecedent basis for this limitation in the claim.

The following art rejection is applied to applicant's claimed invention as best understood in view of the 112 second paragraph rejection above.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4, 6, 8 – 10, 16, 23, 24, 26, 31, 38 – 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Mogi (US 6,115,064).

Regarding claim 1, Mogi discloses an electronic device comprising:

a mechanical driving member (106-111) which performs mechanical operations (see Fig. 5);

a first system controller (camera controlling microcomputer 125) which controls the overall device including mechanical driving member (see Fig. 5; col. 6, lines 54-61 wherein the camera microcomputer 125 controls the operation of the entire camera including the mechanical member in lens device through lens microcomputer 115 when necessary);

a second system controller (lens microcomputer 115), which controls a part of the device, operating independently of the first system controller (see Fig. 5; col. 5, line 66 – col. 6, line 6, wherein the lens microcomputer controls the operations of the focusing lens 105, zooming lens 102 and iris 103 independently using the information transmitted via the feedback circuits 120 & 121);

wherein in accordance with turning on power supply to the first system controller (125), the second system controller (115) controls the mechanical driving member in parallel to a control preparatory operation for control on the overall device by the first system controller (see Fig. 6; col. 4, lines 13-17, 52-59 & col. 7, lines 17-21 wherein the preparatory operation such as fading control operation is initialized and ended by the camera microcomputer 125 in parallel to the lens initialization and its complete process which is controlled by the lens microcomputer

115 to prevent abnormal variation from appearing in the picture displayed in electronic viewfinder).

Regarding claim 2, camera microcomputer (125) is a central processing unit, and wherein the camera microcomputer starts an operating system immediately after turning on of the power supply to the camera and also operates a control application program (fading control application). It is noted that the camera must start an operating system before operating a control application program for fading (see col. 7, lines 17-21).

Regarding claim 4, the period from turning on the camera to turning off the camera after being used to capture/record images is longer than the period of camera's initialization.

Regarding claim 6, Mogi also discloses that the second system controller (115) is a central processing unit (for the lens) and is always powered (see Figs. 5 & 6 wherein the power supply is always on).

Regarding claim 8, it is clear that the second system controller is a hard-wired logic circuit as shown in Fig. 5.

Regarding claim 9, the first system controller must have processing speed faster than that of the second system controller since the first system controller controls the entire camera

operation which must require a faster processing speed compared to the second system controller which only controls the lens device (see col. 6, lines 54-58).

Regarding claim 10, the electric consumption of the second controller must be lower than that of the first system controller because the first system controller controls the entire camera operation while the second system controller controls only the lens device which requires less power supply (see col. 6, lines 54-58).

Regarding claim 16, Mogi's camera clearly has an in-use status (when the camera is turned on and being used) and a non-use status (when the camera is turned off and not being used) which is different from the in-use status, and wherein the second system controller controls the mechanical driving member in parallel to the control preparatory operation on the overall device by the first system controller, so as to cause the device to enter the in-use status (powered on and used) from the non-use status (powered off and not used) as analyzed in claim 1.

Regarding claim 23, the claimed limitations are analyzed with respect to claim 1.

Regarding claim 24, the claimed limitations are analyzed with respect to claim 2.

Regarding claim 26, the claimed limitations are analyzed with respect to claim 4.

Regarding claim 31, the claimed limitations are analyzed with respect to claim 16.

Regarding claim 38, the claimed limitations are analyzed with respect to claim 1.

In addition, the computer program product having readable program code must be stored in a memory of the camera apparatus in order for the microcomputers 125 and 115 to execute instruction code to perform all functions as disclosed.

Regarding claim 39, the claimed limitations are analyzed with respect to claim 16.

Regarding claim 40, Mogi discloses an image sensing apparatus comprising:

image sensing means (CCD 116) for converting an optical image of an object to electric signals and outputting the electric signals (see Fig. 5);

mechanical drive means (106-111) for driving a mechanical component of the image sensing apparatus (see Fig. 5);

signal processing means (118) for generating image signals by processing the electric signals outputted from the image sensing means (see Fig. 5);

file system means (inherent camera's executable file system) for storing the image data generated by the signal processing means to a storage medium (VTR 128 or an inherent buffer for storing images in processing circuit 118) (see Fig. 5; col. 6, lines 11-20);

control means (115, 125) for simultaneously starting initialization of the mechanical drive means, the signal processing means and the file system means (executable file system) in response to turning on of the image sensing apparatus as analyzed in claim 1.

Regarding claim 41, the initialization of the file system means must be executed by the camera control microcomputer including an operation of obtaining information (video signal) on the storage medium of the inherent buffer in order for the camera to be fully initialized by fading video signal outputted from the buffer when the power supply is turned on (see col. 7, lines 17-20; col. 6, lines 54-58).

Regarding claim 42, the information in the storage medium includes at least one of the file format, which is video signal format as shown in col. 7, lines 17-20 & 32-34.

Regarding claim 43, the mechanical driving means includes at least a lens drive unit as shown in Fig. 5.

Regarding claim 44, Mogi shows that the control means adopts by a real time multi task monitoring system of shading operation for performing various initialization operation of the camera apparatus (see col. 4, lines 13-17 wherein the fading indicates that the real time multi task monitoring is in process of initialization).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person



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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3 & 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6,115,064) in view of Winter (US 4,521,678).

Regarding claim 3, Mogi does not teach that if the completion of the control preparatory operation has not been notified within a predetermined period from the first system controller since the turning on of the power supply to the first system controller, the second system controller returns the first system controller to a status before the power supply was turned on to the first system controller, and turns off the power supply to the first system controller. However, Winter teaches a power management control method during initialization process of computer means in which two control processes are implemented. Upon receiving the supply voltage after the power switch has been turned on, the computer means performs predetermined initialization procedures. If the computer means does not successfully complete the prescribed initialization procedures before the predetermined time interval elapses, the computer means must return the computer system to its initial status before the supply voltage was turned on to ensure proper operation of the system and then turns off the supply voltage to the system's circuitry to avoid excessive drain on the battery as suggest in col. 3, lines 42-46 & line 59 to col. 4, line 4.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the camera's initialization processes in Mogi by configuring the power management as taught by Winter so that if the completion of the control preparatory operation has not been notified within a predetermined period from the first system controller since the turning on of the power supply

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to the first system controller, the second system controller returns the first system controller to a status before the power supply was turned on to the first system controller, and turns off the power supply to the first system controller to ensure proper operation of the camera and avoid excessive drain on the battery.

Regarding claim 25, the claimed limitations are analyzed with respect to claim 3.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6,115,064) in view of Yamagami et al (US 6,229,954).

Regarding claim 7, Mogi discloses the power source in the video camera apparatus is turned on by the first system controller via operating part (126) as shown in col. 6, lines 61-63 & col. 7, lines 17-20. Mogi does not disclose that the second system controller (115) controls the power source to the first system controller. However, Yamagami teaches an obvious design variation in which an operation part (15) consisting all operating buttons including a power switch for turning on power supply to the camera is controlled by the mechanical and operation part control CPU (4). This mechanical and operation part control CPU (4) must also control the power supply to the system control CPU (13) (see Fig. 5; col. 16, lines 24-30 for all operating buttons of the camera located in operation part 15 and under control of CPU 4).

Therefore, it would have been obvious to one of ordinary skill in the art to configure the power supply to be either controlled by the first or second system controller in the camera as an obvious design variation.

5. Claims 11, 17, 28 & 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6,115,064).

Regarding claim 11, although Mogi discloses that the camera is a video camera instead of a digital still camera, it is notoriously well known in the art to configure a video camera to capture a still image.

Therefore, it would have been obvious to one of ordinary skill in the art to configure a video camera to capture a still image in a still mode.

Regarding claim 17, the claimed limitations are analyzed with respect to claims 1 & 11.

Regarding claim 28, the claimed limitations are analyzed with respect to claim 11.

Regarding claim 32, the claimed limitations are analyzed with respect to claim 17.

6. Claims 12 – 15, 18 – 22, 29 – 30 & 33 – 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6,115,064) in view of Goo et al (US 5,309,195).

Regarding claim 12, Mogi does not teach mechanical driving member including a lens barrier which protects the optical system of the digital still camera. However, Goo teaches a lens cap which is used for protecting the optical system of the camera (see col. 3, lines 35-37).

It would have been obvious to one of ordinary skill in the art to provide the camera with a lens barrier to protect the lens device from damage or dirt.

Regarding claim 13, Goo teaches that the lens cap is opened by operating the lens group driving motor in clockwise when the power switch is turned on in parallel to the control preparatory operation as analyzed in claim 1 (see Goo in Fig. 2, col. 3, lines 43-50 for steps 110, 120, 130, 170, 180).

Regarding claim 14, Mogi does not teach that the mechanical driving member includes a collapsible barrel of the digital camera. As taught by Goo, it is clear that the camera includes a collapsible barrel to retract the lens and close the lens cap by operating the lens group driving motor in counterclockwise direction until the lens cap is closed which also indicates that the lens group has been collapsed into the camera body (see Fig. 2).

It would prevent lens device from damage by utilizing collapsible lens type wherein the lens group is retracted into the camera body when power supply is turned off.

Therefore, it would have been obvious to one of ordinary skill in the art to implement the collapsible lens type for preventing the lens device from damage when the power supply is turned off and the camera is not in use.

Regarding claim 15, the claimed limitations are analyzed with respect to claim 13.

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Regarding claim 18, the claimed limitations are analyzed with respect to claim 14 (see Goo, Fig. 2; col. 3, lines 54-66 for the lens device being collapsed into the camera body when a predetermined time is passed without any input operation from the user).

Regarding claim 19, Goo also teaches that the lens device is extending to a wide-angle side position (forward direction) from collapsed position (at lens cap closed in step 130) when the power control switch is turned on (see Fig. 2; col. 3, lines 43-45).

Regarding claim 20, the claimed limitations are analyzed with respect to claim 12.

Regarding claim 21, Goo discloses the lens cap being opened when the camera is in an image sensing enabled status as shown in Fig. 2 at steps 100-190.

Regarding claim 22, when the camera is not used and being turned off, the lens barrier which protects the image sensing lens is closed (see Fig. 2).

Regarding claim 29, the claimed limitations are analyzed with respect to claims 12 & 13.

Regarding claim 30, the claimed limitations are analyzed with respect to claims 14 & 15.

Regarding claim 33, the claimed limitations are analyzed with respect to claim 18.

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Regarding claim 34, the claimed limitations are analyzed with respect to claim 19.

Regarding claim 35, the claimed limitations are analyzed with respect to claim 20.

Regarding claim 36, the claimed limitations are analyzed with respect to claim 21.

Regarding claim 37, the claimed limitations are analyzed with respect to claim 22.

7. Claims 5 & 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6115064) in view of Goo et al (US 5,309,195) and in further view of Ozawa (US 5,721,987).

Regarding claim 5, Mogi shows the operating part (126) for operating the camera in Fig. 5; col. 6, lines 61-63.

Mogi does not teach that if no operation instruction has been inputted by the operation unit within a predetermined period, the second system controller returns the mechanical driving member to a status before the power supply was turned on to the first system controller, and turns off the power supply to the first system controller. However, as taught by Ozawa, the camera power source is turned off when no input operation has been performed for five minutes for prolonging the useful life of the power source for the camera (see col. 7, lines 20-23).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Mogi with Ozawa by including power management control for automatically turning off the camera

power source if no operation instruction has been inputted within a predetermined period for prolonging the useful life of the power source for the camera.

Although Mogi and Ozawa do not expressly teach that the mechanical driving member is returned to initial state before the power supply was turned on, this mechanical driving operation is well known in the art and is taught by Goo for driving lens group as well as lens cap to the initial state of closed or off position after a predetermined time is passed for safety retracting the lens device into camera body and saving camera power consumption as shown in Fig. 2, col. 1, lines 52-53; col. 3, line 54 – col. 4, line 2.

Therefore, it would have been obvious to one of ordinary skill in the art to combine Mogi, Ozawa and Goo to implement a complete power management and mechanical driving processes for a camera by returning mechanical driving member to a status before the power supply was turned on to the camera system controller and turning off the power supply to the camera system controller in case there has been no operation instruction has been inputted by the operation unit within a predetermined period for safety retracting the lens device into camera body and saving camera power consumption.

Regarding claim 27, the claimed limitations are analyzed with respect to claim 5.

8. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mogi (US 6,115,064) in view of Fukushima (JP 06-095754).

Regarding claim 45, Mogi teaches the control means that performs initializations of both mechanical drive means and signal processing means as analyzed in claim 1. Mogi does not teach that the control means simultaneously performs the initialization by performing data transmission from the storage medium by the file system means at the initialization by direct memory access (DMA), and performing initialization of the mechanical drive means and signal processing means during idle of the DMA. However, as taught by Fukushima, it is well known in the art that the DMA is utilized in a computer system to simultaneously transfer system file (processing program) from an auxiliary memory into system memory (system RAM) for the initialization process just after power source is turned on, and thereafter the DMA must be idle in order for the CPU to execute the processing program for initializing all system's functions as well as I/O devices recited in the system for shortening waiting time during system initialization (see Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art to utilize the DMA for simultaneously performing data transmission from a storage medium by file system means at the initialization by the DMA and performing initialization of the mechanical drive means and signal processing means during idle time of the DMA for shortening waiting time till which a user can operate a camera after power source is turned on.



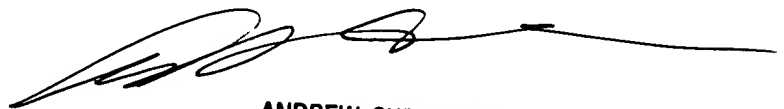
***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (703) 605-4246. The examiner can normally be reached on Monday - Thursday, 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B Christensen can be reached on (703) 308-9644. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

NT.  
July 22, 2003



ANDREW CHRISTENSEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600